

1648

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/551,977

DATE: 03/21/2001  
TIME: 15:07:41

Input Set : A:\1593-004.txt  
Output Set: N:\CRF3\03212001\I551977.raw

ENTERED

RECEIVED

MAR 28 2001

TECH CENTER 1600/290

4 <110> APPLICANT: Chiron Corporation  
5 Polo, John M.  
6 Dubensky, Thomas W., Jr.  
7 Frolov, Ilya  
8 Gardner, Jason P.  
9 Otten, Gillis  
10 Barnett, Susan  
11 Driver, David A.  
13 <120> TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR GENERATING  
14 AN IMMUNE RESPONSE UTILIZING ALPHAVIRUS-BASED VECTOR  
15 SYSTEMS  
17 <130> FILE REFERENCE: 1593.004  
19 <140> CURRENT APPLICATION NUMBER: 09/551,977  
20 <141> CURRENT FILING DATE: 2000-04-14  
22 <160> NUMBER OF SEQ ID NOS: 36  
24 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
26 <210> SEQ ID NO: 1  
27 <211> LENGTH: 11703  
28 <212> TYPE: DNA  
29 <213> ORGANISM: Sindbis virus  
31 <400> SEQUENCE: 1  
32 attgacggcg tagtacacac tattgaatca aacagccgac caattgcact accatcacia 60  
33 tggagaagcc agtagtaaac gtagacgtag acccccagag tccgtttgtc gtgcaactgc 120  
34 aaaaaagctt cccgcaattt gaggtagtag cacagcaggt cactccaaat gaccatgcta 180  
35 atgccagagc attttcgcac ctggccagta aactaatcga gctggagggt cctaccacag 240  
36 cgacgatctt ggacataggg agcgcaccgg ctctgtagaat gttttccgag caccagtatc 300  
37 attgtgtctg ccccatgcgt agtccagaag acccggaccg catgatgaaa tatgccagta 360  
38 aactggcgga aaaagcgtgc aagattacaa acaagaactt gcatgagaag attaaggatc 420  
39 tccggaccgt acttgatacg ccggatgctg aaacaccatc gctctgcttt cacaacgatg 480  
40 ttacctgcaa catgcgtgcc gaatatcccg tcatgcagga cgtgtatatc aacgctcccc 540  
41 gaactatcta tcatcaggct atgaaaggcg tgcggaccct gtactggatt ggcttcgaca 600  
42 ccacccagtt catgttctcg gctatggcag gttcgtaccc tgcgtacaac accaactggg 660  
43 ccgacgagaa agtccttgaa gcgcgtaaca tcggaatttg cagcaciaag ctgagtgaag 720  
44 gtaggacagg aaaattgtcg ataattgagga agaaggagtt gaagcccggt tcgcgggttt 780  
45 atttctccgt aggatcgaca ctttatccag aacacagagc cagcttgagc agctggcatc 840  
46 ttccatcggt gttccacttg aatggaaagc agtcgtacac ttgccgctgt gatacagtgg 900  
47 tgagttgcga aggctacgta gtgaagaaaa tcacatcag tcccgggatc acgggagaaa 960  
48 ccgtgggata cgcggttaca cacaatagcg agggcttctt gctatgcaaa gttactgaca 1020  
49 cagtaaaagg agaacgggta tcgttccctg tgtgcacgta catcccggcc accatatgag 1080  
50 atcagatgac tgggtataatg gccacggata tatcacctga cgatgcacia aaacttctgg 1140  
51 ttgggctcaa ccagcgaatt gtcattaacg gtaggactaa caggaacacc aacacatgc 1200  
52 aaaattacct tctgccgac atagcacaag ggttcagcaa atgggctaag gagcgcaagg 1260  
53 atgatcttga taacgagaaa atgctgggta ctagagaacg caagcttacg tatggctgct 1320  
54 tgtgggcgtt tcgcactaag aaagtacatt cgttttatcg cccacctgga acgcagacca 1380  
55 tcgtaaaagt cccagcctct tttagcgctt ttcccatgct gtccgtatgg acgacctctt 1440  
56 tgcccatgct gctgaggcag aaattgaaac tggcattgca accaaagaag gaggaaaaac 1500  
57 tgctgcaggc ctgcggaggaa ttagtcatgg aggccaaagg tgcttttgag gatgctcagg 1560

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/551,977

DATE: 03/21/2001

TIME: 15:07:41

Input Set : A:\1593-004.txt

Output Set: N:\CRF3\03212001\I551977.raw

58	aggaagccag	agcggagaag	ctccgagaag	cacttccacc	attagtggca	gacaaaggca	1620
59	tcgaggcagc	cgcagaagtt	gtctgcgaag	tggaggggct	ccaggcggac	atcggagcag	1680
60	cattagttga	aaccccgcgc	ggtcacgtaa	ggataatacc	tcaagcaa	gaccgtatga	1740
61	tcggacagta	tatcgttgct	tcgccaaact	ctgtgctgaa	gaatgccaaa	ctcgcaccag	1800
62	cgcacccgct	agcagatcag	gttaagatca	taacacactc	cggaagatca	ggaaggtagc	1860
63	cggtcgaacc	atacgacgct	aaagtactga	tgccagcagg	aggtgccgta	ccatggccag	1920
64	aattcctagc	actgagttag	agcgcacgct	tagtgtacaa	cgaagagag	tttgtgaacc	1980
65	gcaaaactata	ccacattgcc	atgcatggcc	ccgccaaaga	tacagaagag	gagcagtaca	2040
66	aggttacaaa	ggcagagctt	gcagaaacag	agtacgtgtt	tgacgtggac	aagaagcggt	2100
67	gcgttaagaa	ggaagaagcc	tcaggtctgg	tcctctcggg	agaactgacc	aacctccct	2160
68	atcatgagct	agctctggag	ggactgaaga	cccgcctgc	gggtccgtac	aaggtcgaaa	2220
69	caataggagt	gataggcaca	ccggggctcg	gcaagtcagc	tattatcaag	tcaactgtca	2280
70	cggcacgaga	tcttggtacc	agcggaaaga	aagaaaattg	tcgcgaaatt	gaggccgacg	2340
71	tgctaagact	gaggggtatg	cagattacgt	cgaagacagt	agattcgggt	atgctcaacg	2400
72	gatgccacaa	agcgcgtaga	gtgctgtacg	ttgacgaagc	gttcgcgtgc	cacgcaggag	2460
73	cactacttgc	cttgattgct	atcgtcaggc	cccgcagaa	ggtagtacta	tgcgagagacc	2520
74	ccatgcaatg	cggattcttc	aacatgatgc	aactaaaggt	acatttcaat	cacctgaaa	2580
75	aagacatatg	caccaagaca	ttctacaagt	atatctcccg	gcgttgca	cagccagtta	2640
76	cagctattgt	atcgacactg	cattacgatg	gaaagatgaa	aaccacgaac	ccgtgcaaga	2700
77	agaacattga	aatcgatatt	acagggggcca	caaagccgaa	gccaggggat	atcatcctga	2760
78	catgtttccg	cgggtgggtt	aagcaattgc	aaatcgacta	tcccggacat	gaagtaatga	2820
79	cagccgcggc	ctcacaaggg	ctaaccagaa	aaggagtgtg	tgccgtccgg	caaaaagtca	2880
80	atgaaaaccc	actgtacgcg	atcacatcag	agcatgtgaa	cgtgttgctc	acccgcactg	2940
81	aggacaggct	agtgtggaaa	accttgacag	gcgacccatg	gattaagcag	ctactaaca	3000
82	tacctaaagg	aaactttcag	gctactatag	aggactggga	agctgaacac	aagggaataa	3060
83	ttgctgcaat	aaacagcccc	actccccgtg	ccaatccgtt	cagctgcaag	accaacgttt	3120
84	gctgggcgaa	agcattggaa	ccgatactag	ccacggccgg	tatcgtactt	accggttgcc	3180
85	agtggagcga	actgttccca	cagtttgcg	atgacaaacc	acattcggcc	atttacgcct	3240
86	tagacgtaat	ttgcattaag	tttttcggca	tggacttgac	aagcggactg	ttttctaaac	3300
87	agagcatccc	actaacgtac	catcccgcgg	attcagcgag	gccggtagct	cattgggaca	3360
88	acagcccagg	aacccgcaag	tatgggtacg	atcacgccat	tgccgcgcaa	ctctcccgtg	3420
89	gatttccggt	gttccagcta	gctgggaagg	gcacacaact	tgatttgag	acggggagaa	3480
90	ccagagttat	ctctgcacag	cataacctgg	tcccggtgaa	ccgcaatctt	cctcacgcct	3540
91	tagtccccga	gtacaaggag	aagcaaccgc	gcccggtcga	aaaattcttg	aaccagttca	3600
92	aacaccactc	agtacttggt	gtatcagagg	aaaaaattga	agctccccgt	aagagaatcg	3660
93	aatggatcgc	cccgattggc	atagccgggtg	cagataagaa	ctacaacctg	gctttcgggt	3720
94	ttccgcgcga	ggcacggtac	gacctgggtg	tcataacat	tggaactaaa	tacagaaacc	3780
95	accactttca	gcagtgcgaa	gaccatgcgg	cgaccttaaa	aaccttttcg	cgttcggccc	3840
96	tgaattgcct	taacccagga	ggcaccctcg	tgggtgaagtc	ctatggctac	gccgaccgca	3900
97	acagtgagga	cgtagtcacc	gctcttgcca	gaaagtgtgt	caggggtgtct	gcagcgagac	3960
98	cagattgtgt	ctcaagcaat	acagaaatgt	acctgatttt	ccgacaacta	gacaacagcc	4020
99	gtacacggca	attcaccccg	caccatctga	attgcgtgat	ttcgtccgtg	tatgagggtg	4080
100	caagagatgg	agttggagcc	gcgcggtcat	accgcaccaa	aaggggagaat	attgctgact	4140
101	gtcaagagga	agcagttgtc	aacgcagcca	atccgctggg	tagaccaggc	gaaggagtct	4200
102	gccgtgccat	ctataaacgt	tggccgacca	gttttaccga	ttcagccacg	gagacaggca	4260
103	ccgcaagaat	gactgtgtgc	ctaggaaaga	aagtgatcca	cgcggtcggc	cctgattttc	4320
104	ggaagcacc	agaagcagaa	gccttgaaat	tgctacaaaa	cgcctaccat	gcagtggcag	4380
105	acttagtaaa	tgaacataac	atcaagtctg	tcgccattcc	actgctatct	acaggcattt	4440
106	acgcagccgg	aaaagaccgc	cttgaagtat	cacttaactg	cttgacaacc	gcgctagaca	4500

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/551,977

DATE: 03/21/2001

TIME: 15:07:41

Input Set : A:\1593-004.txt

Output Set: N:\CRF3\03212001\I551977.raw

107	gaactgacgc	ggacgtaacc	atctattgcc	tggataagaa	gtggaaggaa	agaatcgacg	4560
108	cggcactcca	acttaaggag	tctgtaacag	agctgaagga	tgaagatatg	gagatcgacg	4620
109	atgagttagt	atggatccat	ccagacagtt	gcttgaaggg	aagaaagga	ttcagtacta	4680
110	caaaaggaaa	attgtattcg	tacttcgaag	gcaccaaatt	ccatcaagca	gcaaaagaca	4740
111	tggcggagat	aaaggctcctg	ttccctaattg	accaggaaag	taatgaacaa	ctgtgtgcct	4800
112	acatattggg	tgagaccatg	gaagcaatcc	gcgaaaagtg	cccggtcgac	cataaccctg	4860
113	cgtctagccc	gcccacaaacg	ttgccgtgcc	tttgcattga	tgccatgacg	ccagaaaggg	4920
114	tccacagact	tagaagcaat	aacgtcaaaag	aagttacagt	atgctcctcc	accccccttc	4980
115	ctaagcaca	aattaagaat	gttcagaagg	ttcagtgac	gaaagtagtc	ctgttttaac	5040
116	cgcacactcc	cgcattcgtt	cccggccgta	agtacataga	agtgcagaa	cagcctaccg	5100
117	ctcctcctgc	acaggccgag	gaggcccccg	aagttgtagc	gacaccgtca	ccatctacag	5160
118	ctgataacac	ctcgtttgat	gtcacagaca	tctcactgga	tatggatgac	agtagcgaag	5220
119	gctcactttt	ttcgagcttt	agcggatcgg	acaactctat	tactagtatg	gacagttggt	5280
120	cgtcaggacc	tagttcacta	gagatagtag	accgaaggca	ggtggtggtg	gctgacgttc	5340
121	atgccgtcca	agagcctgcc	cctattccac	cgccaaggct	aaagaagatg	gcccgcctgg	5400
122	cagcggcaag	aaaagagccc	actccaccgg	caagcaatag	ctctgagtc	ctccacctct	5460
123	cttttggtgg	ggtatccatg	tccctcggat	caattttcga	cggagagacg	gcccgcacgg	5520
124	cagcgttaca	acccctggca	acaggcccca	cggatgtgcc	tatgtctttc	ggatcgtttt	5580
125	ccgacggaga	gattgatgag	ctgagccgca	gagtaactga	gtccgaacct	gtcctgtttg	5640
126	gatcatttga	accgggcgaa	gtgaactcaa	ttatatcgtc	ccgatcagcc	gtatcttttc	5700
127	cactacgcaa	gcagagacgt	agacgcagga	gcaggaggac	tgaatactga	ctaaccgggg	5760
128	taggtgggta	catattttcg	acggacacag	gccctgggca	cttgcaaaag	aagtcctgtc	5820
129	tgcagaacca	gcttacagaa	ccgaccttgg	agcgcaatgt	cctggaaaga	attcatgccc	5880
130	cgggtgctcga	cacgtcgaaa	gaggaacaac	tcaaactcag	gtaccagatg	atgcccaccg	5940
131	aagccaacaa	aagtaggtac	cagtctcgta	aagtagaaaa	tcagaaagcc	ataaccactg	6000
132	agcgactact	gtcaggacta	cgactgtata	actctgccac	agatcagcca	gaatgctata	6060
133	agatcaccta	tcggaaacca	ttgtactcca	gtagcgtacc	ggcgaactac	tccgatccac	6120
134	agttcgcgtg	agctgtctgt	aacaactatc	tgcatgagaa	ctatccgaca	gtagcatctt	6180
135	atcagattac	tgacgagtag	gatgcttact	tggatatggt	agacgggaca	gtcgcctgcc	6240
136	tggatactgc	aaccttctgc	cccgttaagc	ttagaagtta	cccgaacaaa	catgagtata	6300
137	gagccccgaa	tatccgcagt	gcggttccat	cagcgatgca	gaacacgcta	caaaatgtgc	6360
138	tcattgccgc	aactaaaaga	aattgcaacg	tcacgcagat	gcgtgaactg	ccaacactgg	6420
139	actcagcgac	attcaatgtc	gaatgctttc	gaaaatatgc	atgtaatgac	gagtattggg	6480
140	aggagttcgc	tcggaagcca	attaggatta	ccactgagtt	tgtcacccga	tatgtagcta	6540
141	gactgaaagg	ccctaaggcc	gccgcactat	ttgcaaagac	gtataatttg	gtcccattgc	6600
142	aagaagtgcc	tatggataga	ttcgtcatgg	acatgaaaag	ggacgtgaaa	gttacaccag	6660
143	gcacgaaaca	cacagaagaa	agaccgaaag	tacaagtgat	acaagccgca	gaaccctgg	6720
144	cgactgctta	cttatgcggg	attcacccgg	aattagtgcg	taggcttacg	gccgtcttgc	6780
145	ttccaaacat	tcacacgctt	tttgacatgt	cggcggagga	ttttgatgca	atcatagcag	6840
146	aacacttcaa	gcaaggcgac	ccggtactgg	agacggatat	cgcattcattc	gacaaaagcc	6900
147	aagacgacgc	tatggcgtta	accggtctga	tgatcttgga	ggacctgggt	gtggatcaac	6960
148	cactactcga	cttgatcgag	tgcgcctttg	gagaaatatc	atccacccat	ctacctacgg	7020
149	gtactcgttt	taaattcggg	gcgatgatga	aatccggaat	gttcctcaca	ctttttgtca	7080
150	acacagtttt	gaatgtcgtt	atcgccagca	gagtactaga	agagcggctt	aaaacgtcca	7140
151	gatgtgcagc	gttcattggc	gacgacaaca	tcatacatgg	agtagtatct	gacaaagaaa	7200
152	tggctgagag	gtgcgccacc	tggtcaaca	tggaggttaa	gatcatcgac	gcagtcacg	7260
153	gtgagagacc	accttacttc	tgcggcggat	ttatcttgca	agattcgggt	acttccacag	7320
154	cgtgccgcgt	ggcggacccc	ctgaaaaggc	tgtttaagtt	gggtaaaccg	ctccagccg	7380
155	acgacgagca	agacgaagac	agaagacgcg	ctctgctaga	tgaacaaaag	gcgtggttta	7440

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/551,977

DATE: 03/21/2001  
TIME: 15:07:41

Input Set : A:\1593-004.txt

Output Set: N:\CRF3\03212001\I551977.raw

156	gagtaggtat	aacaggcact	ttagcagtgg	ccgtgacgac	ccggtatgag	gtagacaata	7500
157	ttacacctgt	cctactggca	ttgagaactt	ttgcccagag	caaaagagca	ttccaagcca	7560
158	tcagagggga	aataaagcat	ctctacggtg	gtcctaaata	gtcagcatag	tacatttcat	7620
159	ctgactaata	ctacaacacc	accaccatga	atagaggatt	ctttaacatg	ctcggccgcc	7680
160	gccccctccc	ggcccccaact	gccatgtgga	ggccgcggag	aaggaggcag	gcggccccga	7740
161	tgcctgcccc	caacgggctg	gcttctcaaa	tccagcaact	gaccacagcc	gtcagtgtcc	7800
162	tagtcattgg	acaggcaact	agacctcaac	ccccacgtcc	acgcccggca	ccgcgccaga	7860
163	agaagcaggc	gcccagcaa	ccaccgaagc	cgaagaaacc	aaaaacgcag	gagaagaaga	7920
164	agaagcaacc	tgcaaaaccc	aaacccggaa	agagacagcg	catggcactt	aagttggagg	7980
165	ccgacagatc	gttcgacgtc	aagaacgagg	acggagatgt	catcgggcac	gcactggcca	8040
166	tggaaggaaa	ggtaatgaaa	cctctgcacg	tgaaaggaa	catcgaccac	cctgtgctat	8100
167	caaagctcaa	atttaccagg	tcgtcagcat	acgacatgga	gttcgcacag	ttgccagtca	8160
168	acatgagaag	tgaggcattc	acctacacca	gtgaacaccc	cgaaggattc	tataactggc	8220
169	accacggagc	ggtgcagtat	agtggaggta	gatttaccat	ccctcgcgga	gtaggaggca	8280
170	gaggagacag	cggtcgtccg	atcatggata	actccggtcg	ggttgtcgcg	atagtcctcg	8340
171	gtggagctga	tgaaggaa	cgaactgccc	tttcggtcgt	cacctggaat	agtaaaggga	8400
172	agacaattaa	gacgaccccg	gaagggacag	aagagtggtc	cgcagcacca	ctggtcacgg	8460
173	caatgtgttt	gctcggaaat	gtgagcttcc	catgcgaccg	cccgcaccac	tgctataccc	8520
174	gcgaaccttc	cagagccctc	gacatccttg	aagagaacgt	gaacctatgag	gcctacgata	8580
175	ccctgctcaa	tgccatattg	cgggtgcggat	cgtctggcag	aagcaaaaaga	agcgtcactg	8640
176	acgactttac	cctgaccagc	ccctacttgg	gcacatgctc	gtactgccac	catactgaac	8700
177	cgtgcttcag	ccctgttaag	atcgagcagg	tctgggacga	agcggacgat	aacaccatac	8760
178	gcatacagac	ttccgcccag	tttgatacag	accaaagcgg	agcagcaagc	gcaaacaagt	8820
179	accgctacat	gtcgcttaag	caggatcaca	ccgttaaaga	aggcaccatg	gatgacatca	8880
180	agattagcac	ctcaggaccg	tgtagaaggc	ttagctacaa	aggatacttt	ctcctcgcaa	8940
181	aatgccctcc	aggggacagc	gtaacggtta	gcatagtgag	tagcaactca	gcaacgtcat	9000
182	gtacactggc	ccgcaagata	aaacccaaat	tcgtgggacg	ggaaaaatat	gatctacctc	9060
183	ccgttcacgg	taaaaaaatt	ccttgacacag	tgtagcaccg	tctgaaagaa	acaactgcag	9120
184	gctacatcac	tatgcacagc	ccgggaccgc	acgcttatac	atcctacctg	gaagaatcat	9180
185	cagggaaagt	ttacgcaaag	ccgccatctg	ggaagaacat	tacgtatgag	tgcaagtgcg	9240
186	gcgactacaa	gaccagaacc	gtttcgaccc	gcaccgaaat	cactggttgc	accgccatca	9300
187	agcagtgcgt	cgcctataag	agcgaccaaa	cgaagtgggt	cttcaactca	ccggacttga	9360
188	tcagacatga	cgaccacacg	gcccagggga	aattgcattt	gcctttcaag	ttgatcccga	9420
189	gtacctgcat	ggtccctgtt	gcccacgcgc	cgaatgtaat	acatggcttt	aaacacatca	9480
190	gcctccaatt	agatacagac	cacttgacat	tgctcaccac	caggagacta	ggggcaaacc	9540
191	cggaaaccaac	cactgaatgg	atcgtcggaa	agacggtcag	aaacttcacc	gtcgaccgag	9600
192	atggcctgga	atacatatgg	ggaaatcatg	agccagtggg	ggtctatgcc	caagagtgcg	9660
193	caccaggaga	ccctcacgga	tgccacacag	aaatagtaca	gcattactac	catcgccatc	9720
194	ctgtgtacac	catcttagcc	gtcgcatcag	ctaccgtggc	gatgatgatt	ggcgtaactg	9780
195	ttgcagtgtt	atgtgcctgt	aaagcgcgcc	gtgagtgcct	gacgccatac	gccctggccc	9840
196	caaacgccgt	aatcccaact	tcgctggcac	tcttgtgctg	cgttaggtcg	gccaatgctg	9900
197	aaacgttcac	cgagaccatg	agttacttgt	ggtcgaacag	tcagccgttc	ttctgggtcc	9960
198	agttgtgcat	acctttggcc	gctttcatcg	ttctaattgcg	ctgctgctcc	tgctgcctgc	10020
199	cttttttagt	ggttgccggc	gcctacctgg	cgaaggtaga	cgcctacgaa	catgcgacca	10080
200	ctgttccaaa	tgtgccacag	ataccgtata	aggcacttgt	tgaaagggca	gggtatgccc	10140
201	cgtcgaattt	ggagatcaact	gtcatgtcct	cggaggtttt	gccttcacc	aaccaagagt	10200
202	acattacctg	caaattcacc	actgtggtcc	cctcccaaaa	aatcaaatgc	tgcggtcctc	10260
203	tggaatgtca	gccggccggt	catgcagact	atacctgcaa	ggtcttcgga	ggggtctacc	10320
204	cctttatgtg	gggaggagcg	caatgttttt	gcgacagtga	gaacagccag	atgagtgagg	10380

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/551,977

DATE: 03/21/2001

TIME: 15:07:41

Input Set : A:\1593-004.txt

Output Set: N:\CRF3\03212001\I551977.raw

```

205 cgtacgtcga actgtcagca gattgcgcgt ctgaccacgc gcaggcgatt aaggtgcaca 10440
206 ctgccgcgat gaaagtagga ctgcgtatag tgtacgggaa cactaccagt ttcctagatg 10500
207 tgtacgtgaa cggagtcaca ccaggaacgt ctaaagactt gaaagtcata gctggaccaa 10560
208 tttcagcatc gtttacgcca ttcatcata aggtcgttat ccategcggc ctggtgtaca 10620
209 actatgactt cccggaatat ggagcgatga aaccaggagc gtttggagac attcaagcta 10680
210 cctccttgac tagcaaggat ctcatcgcca gcacagacat taggctactc aagccttccg 10740
211 ccaagaacgt gcatgtcccg tacacgcagg ccgcatcagg atttgagatg tggaaaaaca 10800
212 actcaggccg cccactgcag gaaaccgcac ctttcgggtg taagattgca gtaaattccg 10860
213 tccgagcggg ggactgttca tacgggaaca ttccatttc tattgacatc ccgaacgctg 10920
214 cctttatcag gacatcagat gcaccactgg tctcaacagt caaatgtgaa gtcagtgagt 10980
215 gcaacttattc agcagacttc ggcgggatgg ccaccctgca gtatgtatcc gaccgcgaag 11040
216 gtcaatgcc cgtacattcg cattcgagca cagcaactct ccaagagtcg acagtacatg 11100
217 tcctggagaa aggagcgggt acagtacact ttagcaccgc gagtccacag gcgaacttta 11160
218 tcgtatcgct gtgtgggaag aagacaacat gcaatgcaga atgtaaacca ccagctgacc 11220
219 atatcgtgag caccgccac aaaaatgacc aagaatttca agccgccatc tcaaaaacat 11280
220 catggagttg gctgtttgcc ctttcggcg gcgcctcgtc gctattaatt ataggactta 11340
221 tgatttttgc ttgcagcatg atgctgacta gcacacgaag atgaccgcta cgcaccaatg 11400
222 atccgaccag caaaactcga tgtacttccg aggaactgat gtgcataatg catcaggctg 11460
223 gtacattaga tccccgctta ccgcgggcaa tatagcaaca ctaaaaactc gatgtacttc 11520
224 cgaggaagcg cagtgcataa tgctgcgcag tgttgccaca taaccactat attaaccatt 11580
225 tatctagcgg acgcaaaaa ctcaatgtat ttctgaggaa gcgtggtgca taatgccacg 11640
226 cagcgtctgc ataactttta ttatttcttt tattaatcaa caaaattttg tttttaacat 11700
227 ttc 11703
228 <210> SEQ ID NO: 2
229 <211> LENGTH: 11703
230 <212> TYPE: DNA
231 <213> ORGANISM: Sindbis virus
233 <400> SEQUENCE: 2
234 attgacggcg tagtacacac tattgaatca aacagccgac caattgcact accatcacia 60
235 tggagaagcc agtagtaaac gtagacgtag acccccagag tccgtttgtc gtgcaactgc 120
236 aaaaaagctt cccgcaattt gaggtagtag cacagcaggt cactccaaat gaccatgcta 180
237 atgccagagc attttcgcac ctggccagta aactaatcga gctggaggtt cctaccacag 240
238 cgacgatctt ggacataggg agcgcaccgg ctctagaat gttttccgag caccagtatc 300
239 attgtgtctg ccccatgcgt agtccagaag acccggaccg catgatgaaa tatgccagta 360
240 aactggcgga aaaagcgtgc aagattacaa acaagaactt gcatgagaag attaaggatc 420
241 tccggaccgt acttgatacg ccgatgctg aaacaccatc gctctgcttt cacaacgatg 480
242 ttacctgcaa catgcgtgcc gaatattccg tcatgcagga cgtgtatata aacgctcccg 540
243 gaactatcta tcatcaggct atgaaaggcg tgcggaccct gtactggatt ggcttcgaca 600
244 ccaccagtt catgttctcg gctatggcag gttcgtacce tgcgtacaac accaactggg 660
245 ccgacgagaa agtccttgaa gcgcgtaaca tcggactttg cagcaciaag ctgagtgaag 720
246 gtaggacagg aaaattgtcg ataatgagga agaaggagtt gaagcccggg tcgcgggttt 780
247 atttctccgt aggatcgaca ctttatccag aacacagagc cagcttgcat agctggcatc 840
248 ttccatcggt gttccacttg aatggaaagc agtcgtacac ttgccgctgt gatacagtgg 900
249 tgagttgcga aggctacgta gtgaagaaaa tcaccatcag tcccgggatc acgggagaaa 960
250 ccgtgggata cgcggttaca cacaatagcg agggcttctt gctatgcaaa gttactgaca 1020
251 cagtaaaagg agaacgggta tcgttccctg tgtgcacgta catcccggcc accatatgcg 1080
252 atcagatgac tgggtataatg gccacggata tatcacctga cgatgcacia aaacttctgg 1140
253 ttgggctcaa ccagcgaatt gtcattaacg gtaggactaa caggaacacc aacaccatgc 1200
254 aaaattacct tctgccgatc atagcacaag ggttcagcaa atgggctaag gagcgcaagg 1260

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/551,977

DATE: 03/21/2001

TIME: 15:07:42

Input Set : A:\1593-004.txt

Output Set: N:\CRF3\03212001\I551977.raw